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52. The Flower of *Yucca* and its Fertilization.—The flowers of all the species are more or less pendulous, open towards evening, and remain wide open through the night and half close in the morning, continuing in that condition until one or two days afterwards, when they drop off, or, if fertilized, wither and become erect. The sagittate anthers open a little before the flowers do, curve backward, and contract to about one-fourth their former size, and thus expel the heavy, somewhat gelatinous pollen-grains, which remain in different little lumps within the flowers. What we usually call the stigma is the style, or rather, the three styles; these together form the stigmatic tube, their edges conniving and their inner sides, the inner coating of the tube, exhibiting the stigmatic surface. This tube is directly connected with the ovarian cells. The pollen, introduced into the tube, begins to develop and to enter upon its functions. But, without artificial aid, it never gets into it. Nocturnal insects are the agents—in our gardens, at least, a white moth of the genus *Tortrix*. If, about sunset, when the flower is fully open, we take up the pollen-lumps from the flower, and, with a camel-hair brush, well introduce them into the stigmatic tube, we may supply the action of insects wanting in Northern or European gardens, far away from the native home of the *Yuccas*, and succeed in producing fruit and seed, which thus far are almost unknown in cultivation.

ST. LOUIS, June, 1872.

DR. GEORGE ENGELMANN.

53. *Botrychium matricariæfolium*, A. Braun.—I send you a couple of specimens of this fern, from a locality in the neighborhood of Utica which I found last summer.

I sent specimens to Prof. Eaton, who pronounced it *B. matricariæfolium*, and stated that he had received it from Lake Superior, and from Susquehannah Co., Pa. He also stated that almost the same thing was found in this vicinity several years ago, by Mr. Paine, but that the specimen sent him by Mr. Paine was so imperfect that he passed it over as a form of *B. lanceolatum*.

I have not conferred with Paine about it; but, as he says nothing of it in his catalogue, it seems fair to conclude that he did not know of this locality.

It grows on the sides of a shady ravine some four miles from the city. I found growing side by side with it; *B. Virginicum*, Swartz; *B. Virginicum*, var. *gracile*, Pursh; *B. lunarioides*, Swartz; *B. lanceolatum*, Angstroem.

The specimens I send were gathered June 29, 1872. The locality is quite limited in extent, but the plant seems abundant. Why has not Prof. Eaton described this species in the Manual? It is the same as Wood's *B. neglectum*, of course.

I found quite a curiosity at the Mud Lake Swamp (Paine's Catalogue) a few days ago—several specimens of *Cypripedium spectabile*, Swartz, with the labellum double, the two being quite distinct throughout, and about two-thirds the size of the ordinary flower, and all the other parts of the flower single.

EDWIN HUNT.

UTICA, N. Y., July 7, 1872.

54. Bees puncturing Flowers.—This spring we received from Lewis